



**Communicable Disease and Epidemiology News**

Published continuously since 1961  
Laurie K. Stewart, MS, Editor

 **Public Health**  
Seattle & King County  
HEALTHY PEOPLE. HEALTHY COMMUNITIES.  
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**Vol. 43, No. 6**

**June 2003**

- **West Nile Virus, Summer 2003**
- **Monkey Pox Outbreak in the Midwest US**
- **Infant Pertussis on the Rise in King County**

**West Nile Virus: Summer 2003**

At the end of last month, a suspect case of West Nile virus (WNV) was investigated in Franklin County, Washington. While the organism causing that illness was eventually identified as St. Louis encephalitis virus (another mosquito-transmitted flavivirus), this event was good preparation for what will likely be Washington State's first full summer West Nile virus season. In the fall 2002, WNV was detected in a crow, a raven, and two horses in Washington State, and it is likely that WNV activity will increase this summer. The following information summarizes clinical manifestations, diagnosis and laboratory testing, and reporting for WNV infections in King County.

WNV is transmitted by the bite of one of a number of mosquito species (primarily *Culex* species in Washington), that become infected after feeding on birds carrying WNV. WNV is not transmitted person-to-person, or to humans directly from dead or living animals, other than mosquitoes. **In 2002, transfusion of blood products and organ transplantation were identified as potential routes of infection with WNV, and a single case of transplacental infection was reported.**

**Clinical presentations:** WNV infection should be considered in persons of all ages (particularly in May – November) with *unexplained* encephalitis, aseptic meningitis, presumed Guillain-Barre Syndrome, or other neurological presentations described below. Because WNV transmission can occur year-round in some areas, obtaining a recent travel history is always important.

Most WNV infections are mild or asymptomatic. **Approximately 20% of infected persons develop West Nile fever**, a mild form of infection. The incubation period is thought to range from 3 to 14 days and symptoms last 3-6 days. Symptoms of West Nile fever may include fever, malaise, anorexia, nausea, vomiting, eye pain, headache, body aches, skin rash, and swollen lymph glands.

Approximately 1 in 150 infections cause the more severe form of disease, **meningoencephalitis**. Meningo-encephalitis is associated with a range of neurologic and systemic manifestations including headache, high fever, gastrointestinal symptoms, neck stiffness, stupor, disorientation, cranial nerve abnormalities, ataxia, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. Case-fatality rates range from 3% to 15% and are highest in the elderly. **Neuromuscular weakness in persons with a viral meningoencephalitis syndrome is suggestive of WNV infection.** Other neurological presentations include ataxia and extrapyramidal signs, tremor and Parkinson-like syndrome, cranial nerve

abnormalities, myelitis, optic neuritis, polyradiculitis, acute flaccid paralysis, and seizures.

There is no vaccine or specific therapy for WNV in humans. In severe cases, intensive supportive therapy is indicated, including hospitalization, intravenous (IV) fluids,

**Reporting West Nile Virus**

**What to report:** Hospitalized adult or pediatric patients with any of the following clinical syndromes:

- 1) Viral encephalitis, a clinical diagnosis characterized by:
  - a) Fever  $\geq 38^{\circ}\text{C}$  or  $100^{\circ}\text{F}$  **and**
  - b) CNS signs may include altered mental status (altered level of consciousness, confusion, agitation, or lethargy), coma, or other cortical signs (cranial nerve palsies; paresis or paralysis, or seizures), **and**
  - c) Abnormal CSF profile suggestive of viral etiology: a negative bacterial stain and culture, CSF pleocytosis and/or moderately elevated protein
- 2) Aseptic meningitis occurring May through November in any patient  $\geq 18$  years of age, characterized by:
  - a) Fever  $\geq 38^{\circ}\text{C}$  or  $100^{\circ}\text{F}$  **and**
  - b) Signs of meningeal inflammation (stiff neck, headache, photophobia) **and**
  - c) Abnormal CSF profile suggestive of viral etiology: a negative bacterial stain and culture, CSF pleocytosis, and/or moderately elevated protein
- 3) Presumed Guillain-Barre syndrome or acute flaccid paralysis even in the absence of fever and other neurologic symptoms.
- 4) Suspected West Nile virus infection in patients with potential recent blood donation or transfusion histories, organ transplant recipients, laboratory or occupational exposures, transplacental or breast-feeding associated exposures.
- 5) Laboratory confirmed WNV infection in any patient.

**How to Report: Report cases to Public Health at 206-296-4774 within 3 work days**, and sooner when possible. When taking a history from a suspected WNV patient, determine if the patient received blood transfusions or organs within the 4 weeks preceding symptom onset. If so, serum or tissue samples should be retained for testing. In addition, please ask about, and report any history of blood or organ donation within 2 weeks of symptom onset for persons with suspected WNV infection. Prompt reporting of these cases will facilitate withdrawal of potentially infected blood components.

airway management, respiratory support, prevention of secondary infections and good nursing care.

**Laboratory Testing for WNV:** An enzyme-linked immunosorbent assay (ELISA) to detect IgM and IgG antibodies in serum and CSF is available for **hospitalized patients** through the Washington State Public Health Laboratories (PHL). **Testing can be arranged only after consultation with Public Health – Seattle & King County.** Commercial laboratory testing is available to diagnose patients with suspected mild forms of WNV infection. All positive laboratory findings, including those from commercial laboratories, should be reported to Public Health.

Additional Information on WNV is available at the Centers for Disease Control and Prevention (CDC) WNV web site: <http://www.cdc.gov/ncidod/dybid/westnile/index.htm>  
Public Health – Seattle & King County WNV web site: <http://www.metrokc.gov/health/westnile/>  
Washington State Department of Health WNV web site: <http://www.doh.wa.gov/ehp/ts/Zoo/WNV/WNV.html>

Monkeypox Outbreak in the Midwest US

As of June 18<sup>th</sup>, 2003, 87 cases of monkeypox have been reported in six Midwest states. The majority of patients had direct or close contact with wild or exotic mammals such as prairie dogs (*Cynomys* sp.).

Monkeypox is an orthopox virus that clinically resembles smallpox virus, differing biologically and epidemiologically. Because smallpox vaccine (vaccinia) offers some protection against monkeypox, the (CDC) recently released guidelines on using smallpox vaccine, Cidofovir, and vaccinia immune globulin (VIG) for person exposed to monkeypox, and for persons infected with monkey pox. Treatment with these regimens come under an investigational new drug (IND) protocol sponsored by the CDC.

Please keep this latest scourge in mind when evaluating persons with a compatible clinical syndrome (rash, fever, and other symptoms) and a relevant exposure history to exotic mammalian pets. Exposure includes living in the same household, petting, handling, or visiting a pet holding facility (pet store, veterinary clinic, pet distributor). Exotic mammalian pets include prairie dogs, Gambian giant rats, and rope squirrels. Exposure to other exotic or non-exotic

pets will be considered on a case-by-case basis; assessment should include the likelihood of contact with a mammal with monkeypox and the compatibility of clinical illness with monkeypox.

For more information on monkey pox, including “Interim Infection Control and Exposure Management Guidance in the Health-Care and Community Setting for Patients with Possible Monkeypox Virus Infection”, please go to:<http://www.cdc.gov/ncidod/monkeypox/index.htm>

Infant Pertussis on the Rise in King County

Between January and mid-June of 2003, 15 King County infants, who were less than 120 days old, have been reported with laboratory confirmed pertussis. These 15 cases represent 14% (15/105) of all cases of pertussis reported so far this year. By contrast, only 7% (11/155) of all pertussis cases reported in all of 2002 were in infants less than 120 days old.

While older infants and toddlers may present with symptoms that are clinically diagnostic for pertussis, very young infants may have less specific symptoms. This may delay the inclusion of pertussis in the differential diagnosis. For example, some young infants may experience difficulty eating rather than presenting with a clearly defined cough syndrome. Further, because of their very young age and limited activities, transmission of pertussis is most likely from the adults and older children in the home.

Providers are urged to maintain a heightened awareness of infant pertussis disease when seeing babies presenting with breathing and/or feeding difficulties. It is important to ask specifically about coughing household members and close contacts of these infants to identify the source of infection.

Public Health-Seattle & King County Communicable Disease section is participating in a CDC sponsored multi-site case-control study to better understand the transmission patterns and sources of infant pertussis. Additional information about diagnosing and treating pertussis can be

**Disease Reporting**

AIDS/HIV..... (206) 296-4645

STDs ..... (206) 731-3954

TB ..... (206) 731-4579

Other Communicable Diseases ..... (206) 296-4774

Automated 24-hr reporting line  
for conditions not immediately  
notifiable..... (206) 296-4782

**Hotlines:**

Communicable Disease ..... (206) 296-4949

HIV/STD ..... (206) 205-STDS

**EPI-LOG Online: [www.metrokc.gov/health/providers](http://www.metrokc.gov/health/providers)**

Reported Cases of Selected Disease				
	2003	2002	2003	2002
Campylobacteriosis	26	26	90	110
Cryptosporidiosis	4	1	16	5
Chlamydial infections	393	394	1,987	1,768
Enterohemorrhagic <i>E. coli</i> (non-O157)	0	0	0	0
<i>E. coli</i> O157: H7	1	1	11	4
Giardiasis	12	21	46	91
Gonorrhea	119	123	605	604
<i>Haemophilus influenzae</i> (cases <6 years of age)	0	0	0	0
Hepatitis A	4	3	15	21
Hepatitis B (acute)	1	2	16	9
Hepatitis B (chronic)	60	54	260	206
Hepatitis C (acute)	0	0	5	6
Hepatitis C (chronic, confirmed/probable)	78	132	436	686
Hepatitis C (chronic, possible)	13	36	106	184
Herpes, genital (primary)	54	59	274	274
HIV and AIDS (includes only AIDS cases not previously reported as HIV)	57	85	193	306
Measles	0	0	0	0
Meningococcal Disease	0	2	3	12
Mumps	0	0	0	0
Pertussis	24	17	94	43
Rubella	0	2	0	2
Rubella, congenital	0	0	0	0
Salmonellosis	23	12	89	62
Shigellosis	2	2	52	19
Syphilis	7	2	35	21
Syphilis, congenital	0	0	0	0
Syphilis, late	4	4	20	11
Tuberculosis	4	12	55	55

The *Epi-Log* is available in alternate formats upon request.



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